

Appl. No. 09/301,885
Amdt. dated February 18, 2005
Reply to final Office action of December 22, 2004

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Currently amended) A parallel processing network in which one or more processes can be spawned, comprising:

a plurality of computers coupled together by a communications link; and
process spawning logic included in one of said plurality of computers that automatically spawns processes in response to user specified criteria that control how the processes are to be spawned, and wherein said process spawning logic determines whether sufficient processors are available to spawn the processes and, if not, spawns a reduced number of processes based on the number of available processors;

wherein the user specified criteria comprises a number indicative of at least one process that the spawning logic should spawn and the user specified criteria also comprises a maximum number of CPUs to be used per machine to execute processes.

2. (Original) The parallel processing network of claim 1 wherein the communications link includes a switch.

3. (Canceled).

4. (Currently amended) The parallel processing network of claim 3-1 wherein the user specified criteria also includes a model parameter.

5. (Canceled).

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6. (Previously presented) The parallel processing network of claim 4 wherein each of the plurality of computers includes a CPU and the model parameter refers to the type of CPU.

7. (Currently amended) The parallel processing network of claim 3-1 wherein the user specified criteria includes a resource parameter.

8. (Currently amended) The parallel processing network of claim 7 wherein each of said plurality of computers includes a network interface and the resource parameter refers to a type of network interface.

9. (Original) The parallel processing network of claim 1 wherein said process spawning logic compares the user specified criteria to network features.

10. (Original) The parallel processing network of claim 9 wherein the network features are maintained in a process scheduler included in one of said plurality of computers.

11. (Original) The parallel processing network of claim 9 wherein the network features include an identification of which of said plurality of computers is operational and which are nonoperational and the spawning logic.

12. (Original) The parallel processing network of claim 9 wherein each of said plurality of computers includes a CPU and the network features include the model of CPU.

13. (Original) The parallel processing network of claim 9 wherein each of said plurality of computers includes a network interface resource and the network features include the type of network interface resource.

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14. (Currently amended) The parallel processing network of claim 9 wherein the user specified spawning logic spawns fewer processes than the user specified number of processes.

15. (Currently amended) A parallel processing network, comprising:
a plurality of processors coupled together by a communications link;
a process scheduler accessible by at least one of said processors, said process scheduler maintains a list of network features;

spawning logic coupled to said process scheduler, said spawning logic receives a set of parameters from a user that control how processes are to be spawned by the root machine, the set of parameters including a user desired number indicative of at least one of processes to be spawned, said spawning logic determines whether a sufficient number of processors are available to permit the user desired number of processes to be spawned in accordance with the user specified parameters and, if not, spawns a reduced number of processes based on the number of available processors;

wherein said spawning logic also determines whether sufficient network features are available to permit the user desired number of processes to be spawned by accessing the process scheduler to read the list of network features.

16. (Original) The parallel processing network of claim 15 wherein the user parameters include a particular model of processor to which the processes are to be spawned.

17. (Original) The parallel processing network of claim 16 wherein the user parameters include a particular type of a network resource.

18. (Canceled).

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19. (Original) The parallel processing network of claim 17 wherein the user parameters include a maximum number of CPUs to use per machine for spawning processes.

20. (Currently amended) A computer readable storage medium for storing an executable set of software instructions which, when inserted into a host computer system, is capable of controlling the operation of the host computer, said software instructions being operable to automatically spawn parallel processes in a parallel processing network, comprising:

a means for receiving user specified criteria that control how processes are to be spawned, said user specified criteria comprise a maximum number of CPUs to be used per machine to execute processes;

a means for reading a process scheduler to access a list of features associated with the parallel processing network;

a means for comparing the list of network features to the user specified criteria; and

a means for spawning a number of processes that is reduced based on the number of available CPUs.

21. (Original) The computer readable storage medium of claim 20 wherein the user specified criteria includes a user desired number of processes to be spawned and said means for spawning processes includes a means for spawning the user desired number of processes if said means for comparing determines that the parallel processing network has sufficient features in accordance with the user specified criteria.

22. (Original) The computer readable storage medium of claim 21 wherein said means for spawning processes includes spawning fewer than the user desired number of processes if said means for comparing determines that the parallel processing network has insufficient features in accordance with the user specified criteria.

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23. (Original) The computer readable storage medium of claim 21 wherein said means for spawning processes includes spawning fewer than the user desired number of processes if said means for comparing determines that the parallel processing network has insufficient CPUs to spawn the user desired number of processes.

24. (Previously presented) A method of creating processes in a multi-processor network comprising a plurality of computers, at least one computer having a plurality of processors, the method comprising:

receiving criteria that determine how the processes are to be created, the criteria including a maximum number of processors to be used in a computer to execute processes;

comparing the criteria to a database of network features to determine if there are a sufficient number of processors to accommodate the desired number of processes; and

creating processes if a sufficient number of processors are available and, if a sufficient number of processors are not available, creating a reduced number of processes.

25. (Canceled).

26. (Canceled).

27. (Previously presented) The method of claim 24 wherein receiving criteria includes receiving criteria that also include a model of processor and a resource type for running processes.

28. (Original) The method of claim 27 wherein the resource type includes a network interface resource type.

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29. (Previously presented) A method for spawning processes in a multiprocessor network, comprising:

specifying whether processes are to be spawned automatically to match a set of criteria or spawned in accordance with a process group file;

spawning processes to match the criteria if automatic spawning is specified;

spawning processes in accordance with the process group file if so specified; and

spawning a reduced number of processes automatically or in accordance with the process group file based on a number of available processors.

30. (Previously presented) The method of claim 29 further including determining whether the multiprocessor network matches the set of criteria if automatic spawning is specified.

31. (New) A system in which one or more processes can be spawned, comprising:

a plurality of computers coupled together; and

process spawning logic included in at least one of said plurality of computers that automatically spawns processes in response to user-specified criteria that control how the processes are to be spawned, and wherein said process spawning logic determines whether sufficient processors are available to spawn the processes and, if not, spawns a reduced number of processes based on the number of available processors;

wherein each computer comprises a network interface and the user-specified criteria comprises a type of network interface.

32. (New) The system of claim 31 wherein the user-specified criteria also comprises a maximum number of CPUs to be used per machine to execute processes.

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33. (New) The system of claim 31 wherein the user-specified criteria also comprises a number of processes that the spawning logic should spawn.

34. (New) A system in which one or more processes can be spawned, comprising:

a plurality of computers coupled together; and

process spawning logic included in at least one of said plurality of computers, said process spawning logic compares network features to user-specified criteria that comprises a number of processes to be spawned, and, if said spawning logic determines there are insufficient network features to spawn processes in accordance with the user-specified criteria, the spawning logic spawns fewer processes than the user-specified number of processes

35. (New) The system of claim 34 wherein the user-specified criteria also comprises a maximum number of CPUs to be used per machine to execute processes.

36. (New) The system of claim 34 wherein each computer comprises a network interface and the user-specified criteria comprises a type of network interface.

37. (New) A system, comprising:

spawning logic that receives a set of parameters from a user that control how processes are to be spawned, the set of parameters comprising a maximum number of CPUs to use per each of a plurality of machines for spawning processes, said spawning logic determines whether a sufficient number of CPUs are available to permit a user desired number of processes to be spawned in accordance with the user specified parameters and, if not, spawns a reduced number of processes based on the number of available CPUs.

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38. (New) The system of claim 37 wherein the set of parameters ~~also~~ comprises a number of processes that the spawning logic should spawn.